

Order ID 99766

11-13 3:25:24 PM

99766

Page 1

Item ID: D2432

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: 206 (24") Bearpaw

Start Date: 4/12/13 Start Qty: 8.00

8

Cust Item ID:

Required Date: 4/12/13 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals: Process Plan: *ML5*Date: *13-04-16* Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D2432

H

120

0.00

120

FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

Cut Blank as per D2432 File

9

0

Jm13-6-11

130

0.00

130

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Inspect material for defects or damage prior to machining
 2-Machine as per Folio and Dwg D2432 Identify as D2432F
 3-Deburr

*ML/NH**13/07/12*

9

0

140

0.00

140

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

*ML/NH**13/07/12*

9

0

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: DA Date: 13/08/06QA Closed: DA Date: 13/7/23

Work Order: <u>99766</u>	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS			
Part No. <u>D2432</u>		Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>
NCR No. <u>13-2874</u>		Machining <input checked="" type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>
		Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>
		Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data				- Counter bore too Deep. (-.334) 2.0. operator DIDNT check Parts / no re verification done	DA 22/08/06	ACCEPTABLE DEVIATION.	MH 13/07/17	DAS 15 13/07/17	DAS 16 13/07/17	
Equip/Tooling										
Operator	X	13/07/17	130							8
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										

FAULT CATEGORY

Landing Gear	General		
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain	<input type="checkbox"/> Ovalized
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware	<input checked="" type="checkbox"/> Over/Under tolerance
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete	<input type="checkbox"/> Part Incorrect
<input type="checkbox"/> Crushed/Crimped.	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Lost/Missing
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance	<input type="checkbox"/> Part Moved
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Positioned Wrong
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread	<input type="checkbox"/> Power Loss/Surge
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset	<input type="checkbox"/> Pressure/Forced
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration	<input type="checkbox"/> Temperature/Cure
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Weld
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Wrong Stock Pulled
			<input type="checkbox"/> Other

Work Order ID 99766

April-11-13 3:25:24 PM

99766

Page 2

Item ID: D2432

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: 206 (24") Bearpaw

Start Date: 4/12/13 Start Qty: 8.00

8

Cust Item ID:

Required Date: 4/12/13 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150

QC8- Inspect parts - second check

0.00

150

QC

Memo

0.00

Quality Control

DAS
40
9-89

13/07/18

9. 0

160

Identify as per dwg & Stock Location: 0.00

160

Packaging

Memo

0.00

Packaging

P0099372 4
990314
1 X 50

43/1/18 (9)

170

QC21- Final Inspection - Work Order Release 0.00

170

QC

Memo

0.00

Quality Control

MCS 13-07-23

13-07-22

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/> Equip/Tooling <input type="checkbox"/> Operator <input type="checkbox"/> Material <input type="checkbox"/> Setup <input type="checkbox"/> Other <input type="checkbox"/> Process <input type="checkbox"/> Supplier <input type="checkbox"/> Training <input type="checkbox"/> Unapproved <input type="checkbox"/>											

FAULT CATEGORY				
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

Picklist Print

April-11-13 3:25:30 PM

Page 1

Work Order ID: 99766

99766

Parent Item: D2432

D2432

Parent Item Name: 206 (24") Bearpaw

Start Date: 4/12/13

Required Date: 4/12/13

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV:A 12.10.17 AS PER DWG REV.H DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10		Purchased		No		120	sf	1,232.055	3.7	29.6			
									**	30			
<p>*MUHMWB10*</p> <p>UHMW 1" Black</p>													

Jm3-6-11

Location

MAT019

Loc Qty

1232.054989

Loc Code

121278

12.0949895

122575

47.6

123229

53

123704

63.8

123949

6.96

124382

271

124758

377.6

125137

400

124758

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											

FAULT CATEGORY			
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

DART AEROSPACE LTD		Work Order:	99766
Description: Bearpaw		Part Number:	D2432
Inspection Dwg: D2432 Rev: H		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

Inspection Sheet Drawing Dimension		Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A	0.063 x 45°	+0.030/-0.010	0.069 x 45°	✓		MH-04	Caliper
B	5.500	+/-0.030	5.501	✓			
C	0.200	+/-0.030	.198	✓			
D	0.25 x 45°	+/-0.030	.265 x 45°	✓			
E	R0.250	+/-0.030	.25	✓			
F	0.250	+/-0.010	.2505	✓			
G	0.625	+/-0.030	.620	✓			
H	0.375	+/-0.010	.380	✓			
I	0.950	+0.030/0.010	.965	✓			
J	19.000	+/-0.030	19.00	✓		MH-07	tape
K	3.14	+/-0.030	3.145	✓		MH-04	caliper
L	3.28	+/-0.030	3.305	✓			
M	Ø0.260	+0.005/-0.000	.260	✓			
N	Ø0.93	+/-0.030	.933	✓			
O	0.30	+0.030/-0.000	.320	✓			
P	23.750	+/-0.030	23.75	✓		MH-07	tape
Q	7.375	+/-0.030	7.375	✓		MH-07	tape
R	4.250	+/-0.010	4.256	✓		MH-04	caliper
S	2.000	+/-0.030	2.004	✓			
T	9.000	+/-0.010	9.00	✓			
U	9.000	+/-0.010	9.00	✓			
V	0.375	+/-0.010	.380	✓			

Measured by:	MH <i>[Signature]</i>
Date:	13/07/12

Audited by:	DAS 40
Date:	13/07/12

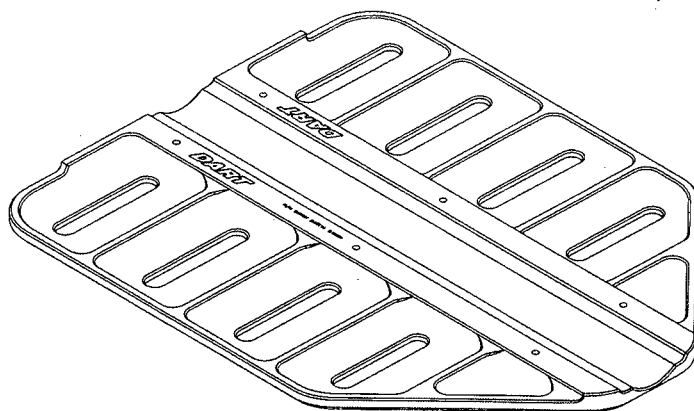
Preliminary Approval:	
Date:	

Rev	Date	Change	Revised by	Approved
A	04.01.09	New Issue P/O K10008/D206-559-015	KJ/RF	
B	12.07.31	Dwg Rev updated	KJ	
C	12.10.26	Dwg Rev updated	KJ	<i>[Signature]</i>

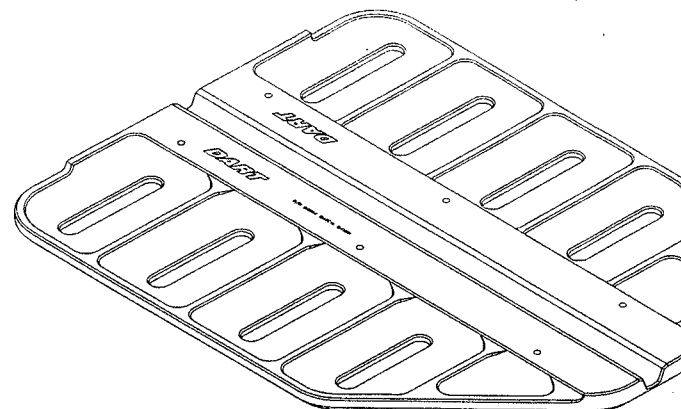
1

2

3



D2432F BEARPAW



D2432-3 BEARPAW

RELEASED
R 2012-10-16

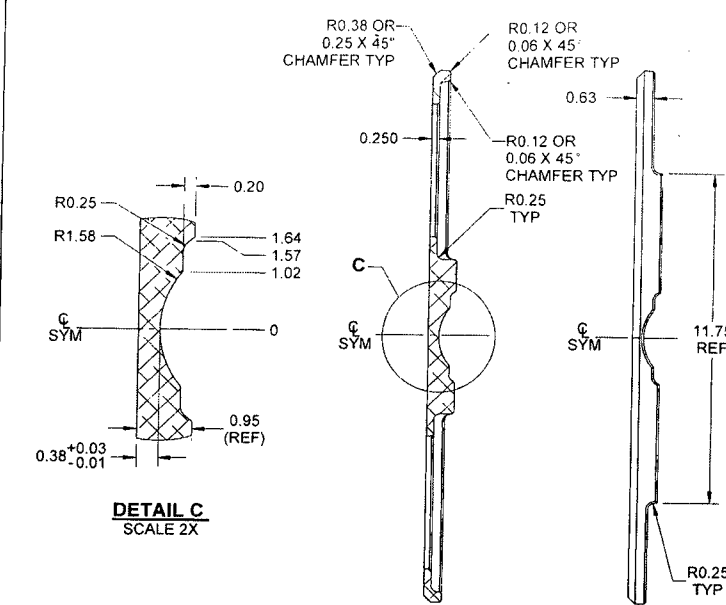
99766-MLJ
13-04-16

REV.	DESCRIPTION	BY	DATE
H	RIB HEIGHTS CHANGED TO CONDITION OF REV. F. SEE REV. F FOR DETAILS.	AP	12.09.24
G	UPDATE DRAWING FORMAT, REMOVED D2432B, ADD D2432-3. ADDED DIMENSION 7.52 (D1-2)	AP	12.05.02
F	CHANGE C'BORE, ADD B AND F P/N	-	98.05.12
E	CHANGE C'BORE DEPTH, BORE RADIUS	-	97.02.27
D	MOVE SLOT	-	96.06.04
C	CHANGE BORE AND C'BORE DEPTH	-	96.03.26
B	RE-DESIGN	-	96.01.24
A	NEW ISSUE	-	95.10.31
DESIGN	LE	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D2432 TITLE BEARPAW SCALE NTS DATE 12.09.24	
DRAWN	AP		
CHECKED	ASS		
MFG. APPR.	91		
APPROVED	140		
DE APPR.	140	<small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COME OR BE COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	
DATE	12.09.24		

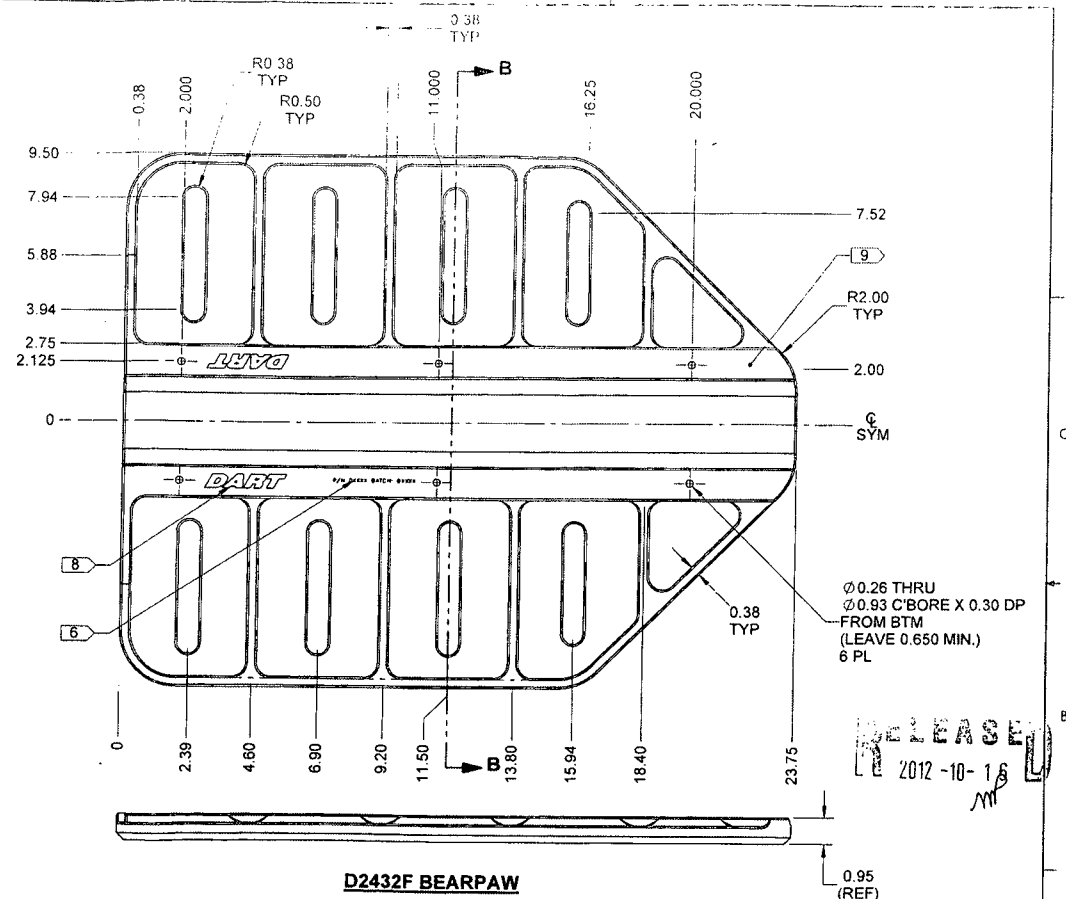
4

5

6



SECTION B-B

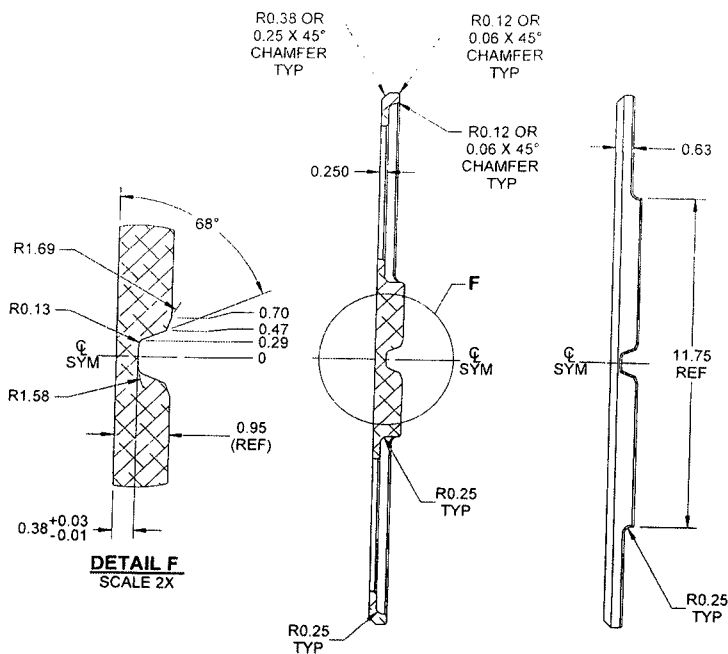


NOTES:

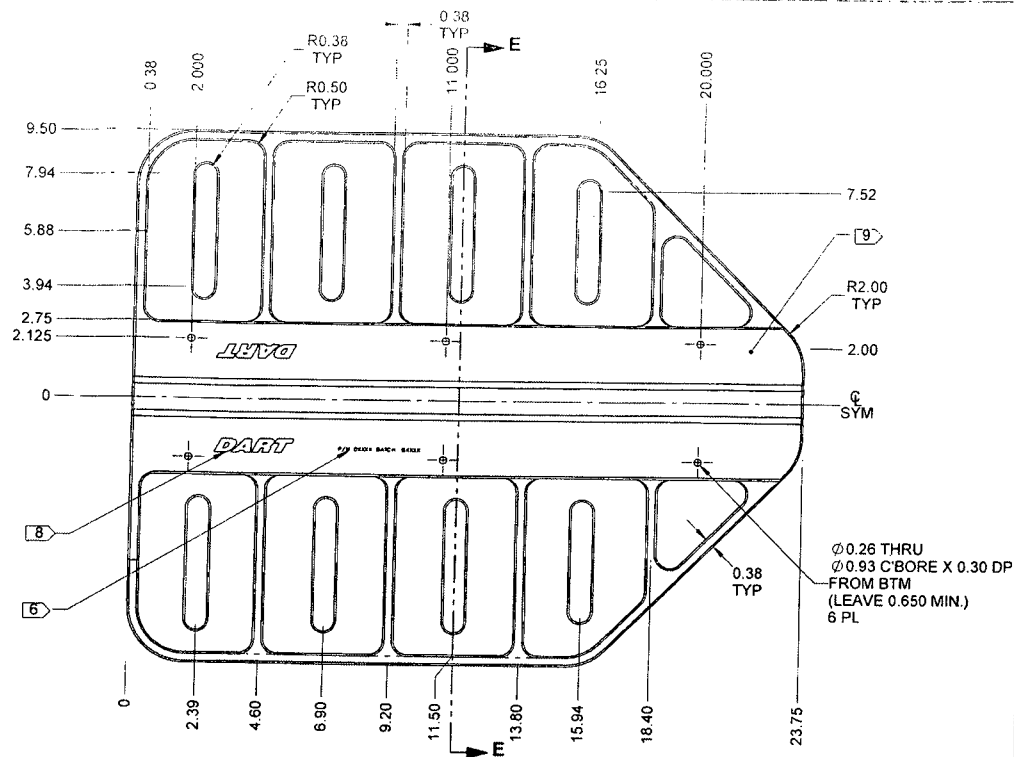
- 1) MATERIAL: UHMW BLACK TIVAR 1000 VIRGIN MATERIAL, 1.000 THICK MACHINED TO 0.950 (REF DART SPEC. MUHMWB10)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE PART NUMBER "D2432" AND BATCH NUMBER "BXXXXX" IN ACCORDANCE WITH QSI 044 METHOD 6.3
- 7) WEIGHT: 5.87 lbs
- 8) ENGRAVE DART LOGO TO MAX DEPTH OF 0.012
- 9) APPLY 0.06 x 45° CHAMFER TO ALL EDGES ON SIDE SHOWN UNLESS OTHERWISE INDICATED
- 10) PROFILE PER DRAWING FILE "D2434F-REV.H, STP"

DESIGN	LE	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D2432 TITLE BEARPAW COPYRIGHT © 1985 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS BUILT ON THE EXPRESS CONDITION THAT IT NOT TO BE USED FOR ANY PURPOSE OR COMED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	REV. H SHEET 2 OF 3 SCALE NTS
DRAWN	AP		
CHECKED	ASS		
MFG. APPR.	21		
APPROVED	140		
DE APPR.	14		
DATE	12.09.24		

99766



SECTION E-E



D2432-3 BEARPAW

NOTES:

- 1) MATERIAL: UHMW BLACK TIVAR 1000 VIRGIN MATERIAL, 1.000 THICK MACHINED TO 0.950 (REF DART SPEC. MUHMB10)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE PART NUMBER "D2432-3" AND BATCH NUMBER "BXXXXX" IN ACCORDANCE WITH QSI 044 METHOD 6.3
- 7) WEIGHT: 6.25 lbs
- 8) ENGRAVE DART LOGO TO MAX DEPTH OF 0.012
- 9) APPLY 0.08 x 45° CHAMFER TO ALL EDGES ON SIDE SHOWN UNLESS OTHERWISE INDICATED
- 10) PROFILE PER DRAWING FILE "D2432-3-REVH.STP"

RELEASED
2012-10-16

DESIGN	LE	DART AEROSPACE LTD	
DRAWN	AP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ALS	DRAWING NO.	REV. H
MFG. APPR.	21	D2432	SHEET 3 OF 3
APPROVED	12	TITLE	SCALE
DE APPR.	12	BEARPAW	NTS
DATE	12.09.24	COPYRIGHT © 1995 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

